

### Postdoctoral position in Neurodevelopment and Epilepsy – Paris, France

A fully-funded, 36-month postdoc position is open from April 2022 in the Poncer lab at the Institut du Fer à Moulin, Paris, to study the anomalous persistence of transient cortical neurons in epilepsy. This collaborative project funded by ERANET Neuron gathers a consortium of 5 leading European groups in the fields of neurodevelopment and epilepsy (Pierani and Poncer in Paris, de la Prida in Madrid, Luhmann in Mainz, and Aronica in Amsterdam).

Programmed cell death of transient neurons, in particular Cajal-Retzius neurons (CRs), is emerging as a key player in cortical development. Anomalous postnatal persistence of CRs is detected in various forms of epilepsy and schizophrenia. Our project aims to explore how persistent CRs contribute to anomalous activities underlying these neurodevelopmental disorders. Combining mouse genetics, viral-based tracing methods, and *in vitro* electrophysiology, we will first test whether and how persistent CRs of diverse origins are synaptically integrated into cortical networks. Next, we will explore how the persistence of distinct CRs perturbs the synaptic and intrinsic properties of cortical neurons. Finally, we will unravel the molecular mechanisms underlying programmed cell death of various CR subtypes and their alteration in the pathology, with specific emphasis on neuronal chloride transport.

The successful candidate will join a dynamic, multidisciplinary research team focused on the molecular and cellular determinants of epileptic networks, with expertise ranging from single-molecule tracking approaches to *in vitro* and *in vivo* electrophysiology. He/she will also participate in consortium activities, including annual scientific meetings, progress reports, and interaction with patient organizations for outreach activities.

Candidates should hold a Ph.D. in Neuroscience and have solid experience with *in vitro* slice electrophysiology. Prior experience with stereotaxic injections and mouse models is preferred. Excellent teamwork and English communication skills are required.

For application, please send a CV, a brief description of research experience and interests, and the names and email addresses of two references to [jean-christophe.poncer@inserm.fr](mailto:jean-christophe.poncer@inserm.fr)

The Institut du Fer à Moulin is a research center affiliated with Inserm and Sorbonne University, located in the heart of the Latin Quarter in Paris. It hosts 8 research teams focusing on neurodevelopment and disorders of the nervous system and 3 state-of-the-art experimental platforms for photonic microscopy, cell engineering, and behavioral exploration. ([www.ifm-institute.fr](http://www.ifm-institute.fr))